U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-341
License No:	NPF-43
Report No:	50-341/97006(DRS)
Licensee:	Detroit Edison
Facility:	Fermi 2 Nuclear Power Plant
Location:	6400 North Dixie Highway Newport, MI 48166
Dates:	April 28 - May 2, 1997
Inspector:	Robert D. Jickling, Emergency Preparedness Analyst
Approved by:	James R. Creed, Chief, Plant Support Branch 1 Division of Reactor Safety

EXECUTIVE SUMMARY

Fermi 2
NRC Inspection Report 50-341/97006

This inspection included a review of the Radiological Emergency Response Preparedness (RERP) program, an aspect of Plant Support. This was an announced inspection conducted by a regional emergency preparedness analyst.

The RERP program was effective in maintaining the operational readiness of your emergency response facilities, equipment, and personnel. Emergency response facilities, equipment, and supplies were in a very good state of operational readiness. Interviews with emergency response organization personnel demonstrated very good knowledge of emergency implementing procedures and responsibilities. Management support was strong.

- The overall effectiveness of the licensee's emergency preparedness facilities, equipment, training, and organization was very good. (Sections P2.1, P3, P5, and P6)

- Licensee personnel appropriately declared two Unusual Events during actual activations of the RERP Plan. Emergency classifications had been made correctly and offsite notifications had been made in a timely manner. (Section P1.1)

- The emergency response facilities were well maintained and in very good material condition. (Section P2.1)

- Interviews with key emergency response organization personnel demonstrated very good knowledge of the emergency implementing procedures and their responsibilities. (Section P5)

- Management support for the RERP program was identified as a strength by the RERP Supervisor. The RERP staff was proactive in maintaining and improving the program and responsive to identified issues. (Section P6)

- The audits of RERP activities satisfied the requirements of 10 CFR 50.54(t) and were excellent in scope and detail. (Section P7)

- The inspector completed Temporary Instruction 2515/134 "Onshift Dose Assessment Capabilities" and verified that the licensee's capabilities met requirements. (Section P9)

Report Details

IV. Plant Support

P1 Conduct of Emergency Preparedness (EP) Activities

P1.1 Actual Emergency Plan Activations

a. Inspection Scope (82701)

The inspector reviewed records and documentation packages regarding plant responses for two actual emergency events which occurred during 1995 and 1996.

b. Observations and Findings

An Unusual Event was declared at 3:03 p.m. on April 9, 1995, due to a valid initiation signal to High Pressure Core Injection (HPCI) and Reactor Core Isolation System (RCIC), start up of both systems, and injection to the reactor vessel by RCIC. The plant was manually scrammed at 3:01 p.m. from 80 percent power in order to monitor the vibration levels of the main turbine during coast down. The Unusual Event was terminated at 5:02 p.m. when reactor recirculation flow was re-established.

An Unusual Event was declared at 2:12 a.m. on March 27, 1996, due to a Technical Specification requirement to shutdown the reactor when both divisions of Emergency Equipment Cooling Water (EECW) were inoperable. The Unusual Event was terminated at 1:50 p.m. when the reactor was placed in cold shutdown.

The two actual events had been reviewed and event packages were compiled by the Radiological Emergency Response Preparedness (RERP) staff to document the reviews. The event packages contained descriptions of the events, assessments of the response, observations, and areas for improvement. The event packages were detailed and self-critical.

c. Conclusions

The inspector concluded that the licensee had appropriately implemented the emergency plan in declaring two Unusual Events. Emergency classifications had been made correctly and offsite notifications had been made in a timely manner.

P2 Status of EP Facilities, Equipment, and Resources

P2.1 Material Condition of Emergency Response Facilities

a. Inspection Scope (82701)

The inspector evaluated the material condition of the Control Room, Technical Support Center (TSC), Operational Support Center (OSC), Alternate OSC (AOSC), Emergency Operations Facility (EOF), and Alternate EOF (AEOF). The offsite team kits were also inspected. The licensee demonstrated the operability of numerous

pieces of equipment, including radiological survey equipment, communications equipment, offsite Radiological Emergency Team (RET) vehicle, and computer terminals.

b. Observations and Findings

Copies of the Emergency Plan Implementing Procedures (EPIPs) were current and available in the Control Room. The TSC and RET kits were in a state of operational readiness and the facility, status boards, and equipment were in excellent material condition. The OSC was in good material condition and newly revised status boards were readily available. The AOSC had been relocated to an upper level of the Office Services Building Machine Shop and was equipped with the new OSC emergency team status boards. The EOF was in very good material condition and RET kit instruments and equipment were calibrated, functional, and in very good order. The dose assessment computers and printers were verified operable and communications systems were functional in the TSC, EOF and AEOF.

The AEOF had been relocated to a new location in the same building at the Western Wayne Center. The new location afforded more than doubled the old area available for EOF staff to perform their emergency response functions.

The inspector identified three EPIPs that were outdated in the AEOF. The RERP Supervisor immediately replaced the three EPIPs with the correct revisions and initiated a Deviation Event Report (DER) to evaluate and correct the cause of the outdated EPIP revisions. RERP staff performed demonstrations of the offsite RET vehicle, radiological survey equipment, communications lines, and computer terminals for displaying plant data and dose assessment programs.

Records for the Prompt Notification System sirens for 1995 and 1996 were reviewed by the inspector. Reported annual operability for 1995 was 98.64 percent, with the lowest month's average reported as 93.12 percent. Reported annual operability for 1996 was 98.94 percent, with the lowest month's average reported as 97.06 percent. Siren operability exceeded the acceptability limit of greater than or equal to 90 percent.

c. Conclusions

Overall, the emergency response facilities were in very good material condition and in a state of operational readiness. Immediate corrective actions were initiated by the RERP Supervisor for several minor procedural revision inconsistencies. Numerous instruments and equipment were operated by the RERP staff and found to be functional. The Prompt Notification System sirens had been appropriately maintained in 1995 and 1996 as indicated by the reported availability averages.

P3 EP Procedures and Documentation

a. Inspection Scope (82701)

The inspector reviewed a selection of RERP Plan sections and EPIPs. EPIPs and RERP Plan sections reviewed including RERP Plan Section O, Revision 18, "RERP

Training," RERP Plan Section B, Revision 18, "Emergency Response Organization," EP-102, Revision 12, "Unusual Event," EP-290, Revision 31, "Emergency Notifications," EP-292, Revision 18, "Emergency Call-Out-Backup Method," and EP-545, Revision 10, "Protective Action Recommendations."

b. Observations and Findings

Discussion with the RERP Supervisor indicated that the State of Michigan was working with the nuclear power plants in the state to develop and implement a new Protective Action Recommendations format. The new format would utilize subareas rather than affected sectors and would facilitate local government determination of areas to be evacuated or sheltered, using geopolitical boundaries.

c. Conclusions

The EPIPs were clear and easy to use. No problems were identified in the procedures or documents reviewed.

P5 Staff Training and Qualification in EP

a. Inspection Scope (82701)

The inspector interviewed four key emergency response organization (ERO) personnel and reviewed training attendance records and the Emergency Notification Duty Roster, dated April 30, 1997. Also, selected training instructor's guides were reviewed by the inspector, including CP-10-17-00-01, "TSC Walkthrough" and "EOF Walkthrough."

b. Observations and Findings

Interviews with key ERO personnel included the EOF's Emergency Officer, Control Room's Nuclear Supervising Operator who could act as a communicator, Nuclear Shift Supervisor who would act as the Emergency Director until the TSC's Emergency Director assumed command and control of the emergency, and the TSC's Emergency Director. Interviews with these ERO personnel indicated very good knowledge of emergency procedures and responsibilities.

Knowledge related to the NRC's and Department of Energy's incident response was demonstrated by the Emergency Officer. Federal incident response information had been incorporated into the licensee's training instructor guides for TSC and EOF Walkthroughs. Also, training had been provided to key ERO personnel by the RERP Supervisor and an NRC Incident Response Coordinator. TSC and EOF Walkthrough instructor guides included NRC and Federal incident response information.

May 1, 1997 training records were reviewed and compared to the Emergency Notification Duty Roster. Records and documents indicated all ERO personnel reviewed were currently qualified.

Discussion with the EP Supervisor indicated that new quarterly drills and tabletop training had been conducted which received positive feedback from ERO personnel interviewed.

c. Conclusions

Overall, EP training was considered very good. Training and drill critique documentation was available and critique forms were adequately detailed. Training records were complete and interviewed individuals were knowledgeable about their ERO responsibilities. Interviewed key personnel were knowledgeable of NRC and Federal incident response. Information related to NRC and Federal incident response was included in training and instructor guides.

P6 EP Organization and Administration (82701)

a. Inspection Scope (82701)

The inspector and RERP Supervisor discussed the current station organization and changes to the organization and program.

b. Observations and Findings

The RERP Supervisor reported to a new Director of Nuclear Licensing, who reported to the Nuclear Assessment Manager, who reported to the Senior Vice President of Nuclear Generation. Discussion with the RERP Supervisor indicated that management support for the EP program was excellent under the current plant organization. Also, management support to the RERP program was indicated by the relocation of the alternate OSC and EOF to improved or larger areas as well as other enhancements to the program.

The RERP staff displayed a proactive attitude which was demonstrated by program upgrades which included approval and use of the new emergency action level procedures and charts, initiation of an Improvement Item Program for evaluation and tracking items from drills, exercises, and training, and participation and observation of other utilities' emergency exercises. Also, the RERP staff had been responsive to identified issues. Examples of the staff's responsiveness included the DER initiated for the outdated EPIP revisions found in the AEOF and the improved emergency team status boards in the OSC and alternate OSC.

c. Conclusions

Management support to the RERP program was identified as a strength by the RERP Supervisor. The RERP staff was proactive in maintaining and improving the program and responsive to identified issues.

P7 Quality Assurance in EP Activities

P7.1 Audits (82701)

a. Inspection Scope (82701)

The inspector reviewed Nuclear Quality Assurance audits for 1995 and 1996.

b. Observations and Findings

The inspector reviewed QA-95-0124, "Quality Assurance Audit of the Emergency Preparedness Program, Audit 95-0112," dated June 9, 1995 and Nuclear Quality Assurance Audit Report 96-0116, "Emergency Preparedness Program," conducted May 20 through 31, 1996.

The 1995 audit identified strengths which included improved pre-drill briefings, drill scenario packages, facility and equipment readiness, and interface with offsite organizations. Weakness identified included discrepancies located in RERP procedures, problems identified during the May 1995 drill, and lack of a testing program for the EOF emergency lighting system.

The 1996 audit identified excellent interface with offsite agencies as a strength and several weaknesses which included the failure of Nuclear Security to implement a change to the RERP Plan, informal transfer of ERO duty assignments, and some uncompleted ERO training.

c. Conclusions

The licensee's 1995 and 1996 audits of RERP activities were effective and satisfied the requirements of 10 CFR 50.54(t). The audits were excellent in scope and detail. Strengths and weaknesses were well supported and corrective actions from previous year's findings were identified.

P8 Miscellaneous EP Issues

(Closed) Inspection Followup Item 50-341/95004-04: Training did not include information related to NRC or other Federal agencies incident response programs. Training had been provided to key ERO personnel and training instructor guides for TSC and EOF walkthroughs included adequate information related to NRC and Federal incident response. Interviews with key ERO personnel identified adequate knowledge of NRC and Federal incident response information had been provided. This item is closed.

(Open) Inspection Followup Item 50-341/96006-09: During the 1996 emergency exercise TSC failed to man the Health Physics Network when requested by the NRC. Corrective actions in progress were discussed with the RERP staff. This item will remain open pending completion of corrective actions and appropriate demonstration.

(Open) Inspection Followup Item 50-341/96006-11: During the 1996 emergency exercise select status boards in the EOF were inadequate. Corrective actions in progress were discussed with RERP staff. This item will remain open pending completion of corrective actions and appropriate demonstration.

P9 Temporary Instruction (TI) 2515/134 Onshift Dose Assessment

The inspectors discussed onshift dose assessment capability and provisions with licensee personnel, reviewed the RERP Plan and EPIPs, and inspected the equipment utilized for dose assessment. The RERP Plan and EPIPS contained provisions for onshift dose assessment. Necessary equipment and personnel training were available and provided. Personnel were knowledgeable of their responsibilities and how to perform dose assessment. The acceptance criteria for the TI were met and this TI is closed. Documentation as to these findings is attached as Attachment A.

P10 Review of UFSAR Commitments

a. Inspection Scope

A discovery of a licensee operating their facility in a manner contrary to the Updated Final Safety Analysis Report (UFSAR) description highlighted the need for a special focused review that compares plant practices, procedures, and parameters to the UFSAR descriptions. While performing the inspections discussed in this report, the inspector reviewed the applicable portions of the Fermi 2 UFSAR that related to Emergency Preparedness.

b. Observations and Findings

UFSAR Chapter 13, "Emergency Planning," Section 13.3, pertained to Emergency Planning. Section 13.5.5, "Radiological Emergency Response Preparedness Implementing Procedures," incorporated the RERP Plan by reference. UFSAR Section 7.8 pertained to the specifics involving the emergency response facilities.

c. Conclusions

Overall maintenance of the Emergency Preparedness sections of the UFSAR was good. Licensee actions were consistent with UFSAR commitments.

X1 Exit Meeting Summary

The inspectors presented the inspection results to members of licensee management at the conclusion of the inspection on May 2, 1997. The licensee acknowledged the findings presented.

The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

A. Antrassian, Compliance Engineer
J. Baum, Specialist, Radiological Emergency Response Preparedness
R. Eberhardt, Director, Nuclear Training
D. Gipson, Sr. Vice President, Nuclear Generation
R. Gummaraju, Auditor, Nuclear Quality Assurance
J. Kauffman, Specialist, Radiological Emergency Response Preparedness
K. Morris, Supervisor, Radiological Emergency Response Preparedness
J. Moyers, Director, Nuclear Quality Assurance
N. Peterson, Supervisor, Compliance
P. Smith, Director, Nuclear Licensing
J. Sweeney, Group Lead, Nuclear Quality Assurance
R. Webster, Specialist, Radiological Emergency Response Preparedness

INSPECTION PROCEDURES USED

IP 82701	Operational Status of the Emergency Preparedness Program
TI 2515/134	Temporary Instruction, Onshift Dose Assessment

ITEMS OPENED, CLOSED, AND DISCUSSED

OPEN

None

CLOSED

50-341/95004-04	IFI	Federal incident response information needed in training.

DISCUSSED

50-341/96006-09	IFI	Failure to man the TSC HPN when requested by NRC.
50-341/96006-11	IFI	Inadequate status boards identified in the EOF.

LIST OF ACRONYMS USED

AEOF	Alternate Emergency Operations Facility
AOSC	Alternate Operational Support Center
CFR	Code of Federal Regulations
DER	Deviation Event Report
EAL	Emergency Action Level
EECW	Emergency Equipment Cooling Water
EP	Emergency Preparedness
ENS	Emergency Notification System
EOF	Emergency Operations Facility
EPIP	Emergency Plan Implementing Procedure
ERO	Emergency Response Organization
HPCI	High Pressure Core Injection
HPN	Health Physics Network
IR	Inspection Report
IFI	Inspection Followup Item
NRC	Nuclear Regulatory Commission
OSC	Operational Support Center
RERP	Radiological Emergency Response Preparedness
RET	Radiological Emergency Team
RCIC	Reactor Core Isolation System
TS	Technical Specification
TSC	Technical Support Center
UFSAR	Updated Final Safety Analysis Report

FORM FOR DOCUMENTATION OF ON-SHIFT DOSE ASSESSMENT CAPABILITY

Fermi /Unit 1/ 50-341 — SITE/UNIT/DOCKET #s

Detroit Edison Company — LICENSEE

10/04/96 — DATE

4.01 DOSE ASSESSMENT COMMITMENT IN EMERGENCY PLAN					
Acceptance Criteria (Refer to page 1 of this Appendix for further detail on the acceptance criteria)	**Person(s) Contacted**	**Position Title(s)**	**Plan Section containing commitment**	**Revision No. and Date**	**Meets acceptance criteria?**
Section 4.01 Item 1 Emergency Plan contains commitment for on-shift dose assessment capability.	Kevin Morris	EP Supervisor	Section B, Table B-2 for Shift Technical Advisor position	Rev. 16, 11/95	Yes
Section 4.01 Item 2 ~~Emergency Plan contains commitment for backup dose assessment capability.~~	Kevin Morris	EP Supervisor	Section I, paragraphs 1.3.1.1 and 1.3.1.1.1	Rev. 16 11/95	Yes
04.02 ON-SHIFT DOSE ASSESSMENT EMERGENCY PLAN IMPLEMENTING PROCEDURE					
	Person(s) contacted	**Position Title(s)**	**Procedure/Indication**	**Revision No. and Date**	**Meets acceptance criteria?**
Section 4.02 Item 1 Procedure initiates dose assessment	Kevin Morris	EP Supervisor	Attachment 1 of: EP-102 through EP-105	Rev. 11, 9/95	Yes
Section 4.02 Item 2 Indications initiate dose assessment	Kevin Morris	EP Supervisor	EP-542	Rev. 4, 8/90	Yes
Section 4.02 Item 3 Procedure for performing dose assessment available.	Kevin Morris	EP Supervisor	EP-542	Rev. 4, 8/90	Yes
04.03 ON-SHIFT DOSE ASSESSMENT TRAINING					
	Person(s) contacted	**Position Title(s)**	**Personnel Trained (Title/#)**		**Meets acceptance criteria?**
Section 4.03 Item 1 On-shift Personnel trained for dose assessment	Kevin Morris	EP Supervisor	Shift Technical Advisor; 8	n/a	Yes

Inspector: Thomas Ploski, Region III, DRS, Plant Support Br. 1